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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT,  
NTS EVENT 'CABRILLO', 7 MARCH 1975

J. R. Woolson, et al

Teledyne Geotech

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**NTS Event "CABRILLO", 7 March 1975**

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**September 1975**

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SDCS Event Report No. 11

NTS Event "CABRILLO", 7 March 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	Origin Time	Latitude	Longitude	$m_b$	$M_s$
NORSAR	14:59:58	36.1N	116.4W	5.4	-
LASA	14:59:59	37.2N	116.6W	5.0	-
PDE	15:00:00	37.1N	116.1W	5.5	-
Hagfors Array, Sweden	14:59:46	35 N	119 W	5.6	-

Using RK-ON, WH2YK, LASA and NORSAR, the epicenter location becomes

SDCS & Arrays	15:00:00	37.0N	116.0W	5.5	4.2
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CPSO and FN-WV were not operational for this event. Long-period array data was not recovered due to SDAC computer problems.

The time window for predicted arrival times of long-period signals at HN-ME was obscured by calibrations on the vertical and radial traces and the transverse channel was inoperative. Duplicate plots are provided for HN-ME short-period and RK-ON long-period signal presentations. The short time segment presentation for HN-ME is included to display the predicted signal arrival window with a minimum of influence on scaling from the excessive spiking evident at this station. The limited data plot for RK-ON long-period signals excludes a large instrument pulse on the LPZ trace immediately preceding the signal arrival. The SPR and SPT traces at RK-CN are reversed in polarity. The LPR instrument at WH2YK was not responding properly and thus is effectively inoperative.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response) with the exception of LASA and NORSAR short-period plots. LASA SP scaling factors are millimicrons per inch. Scaling factors are not reported for NORSAR short-period.



# STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES		ELEVATION METERS	INSTRUMENTATION	
		DEG	MN SECS		SHORT-PERIOD	LONG-PERIOD
ALPA	Alaska	65 14	00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35	41.4 N 085 34 13.5 W	574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32	58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41	19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09	43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49	25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50	20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41	41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

## Notes:

Details of the program used to obtain beamed vertical, radial and transverse data at LASA, ALPA and NORSAR are in the process of being reviewed. Vertical beams are probably valid, horizontal beams at the LASA and NORSAR are questionable. Horizontal beams at ALPA are probably invalid.

FN-WV, RK-ON, WH2YK and HN-ME horizontal instruments are oriented radial and transverse to the Nevada Test Site. CPSO is oriented N-S and E-W. LASA, NORSAR and ALPA beams have been rotated to radial and transverse with respect to the event location.

# HYPOCENTER DETERMINATION

INPUT FOR EVENT 7 MAR 75  
 15:00:00.0 37.000N 116.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	PEST		
LAO	15 02 53.2	-13.4	0.0	12.1	33.8
RK-ON	15 04 45.7	-8.7	-0.0	21.1	42.0
WH2YK	15 05 39.2	-7.8	-0.0	26.6	339.1
NAO	15 11 32.5	-6.9	0.0	73.3	24.2

## 67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
NO CONVERGENCE ON CALC RUN						
15:00:04.5	37.004N	116.005W	23. CALC	2.9	16	4
15:00:00.1	36.977N	116.009W	0. PEST	0.0	2	4

CALC  
 1 . 1  
 0 . 0  
 0 . 0.2 . 0  
 0 . 0.0 . 0  
 0 . 0  
 0 . 0

PEST  
 1 . 1  
 0 . 0  
 0 . 0.2 . 0  
 0 . 0.0 . 0  
 0 . 0  
 0 . 0

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.90  
 MAJOR 136.0KM. MINOR 58.3KM. AZ= 169 AREA= 24931 SQ.KM. PEST

# DATA SUMMARY

INPUT FOR EVENT 7 MAR 75  
15:00:00.0 27.000N 116.000W 0KM.

STA.	PHASE	ARRIVAL TIME	INST	PER	A/T	MAGNITUDE MB	MS	DIP	DIST
IAO	EP	15 02 53.2	SPZ	0.5	0000.				
PK-ON	EP	15 04 45.7	SPZ	1.1	1679.	6.04			21.1
PK-ON	LR	15 13 35.0	LPZ	13.0	116.		4.51		21.1
WH2YK	EP	15 05 39.2	SPZ	1.0	43.	4.80			26.6
WH2YK	LQ	15 14 40.0	LPT	23.0	14.				
WH2YK	LR	15 17 00.0	LPZ	17.0	49.		4.24		26.6
NAO	EP	15 11 32.5	AB	1.2	98.	5.56			73.3

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LP MAG	LP SDV	LP STA
15:00:00.1	26.977N	116.009W	0. FIRST	5.46	0.63	3	4.24*****		1



RK-CN 07 MAR 75

15:04:45.7

SPZ  
1250

SPR  
726

SPT  
78.3

TIME

10 sec

\*polarity reversed

15:05:00

6.



W12YK 07 MAR 75

15:05:39.2



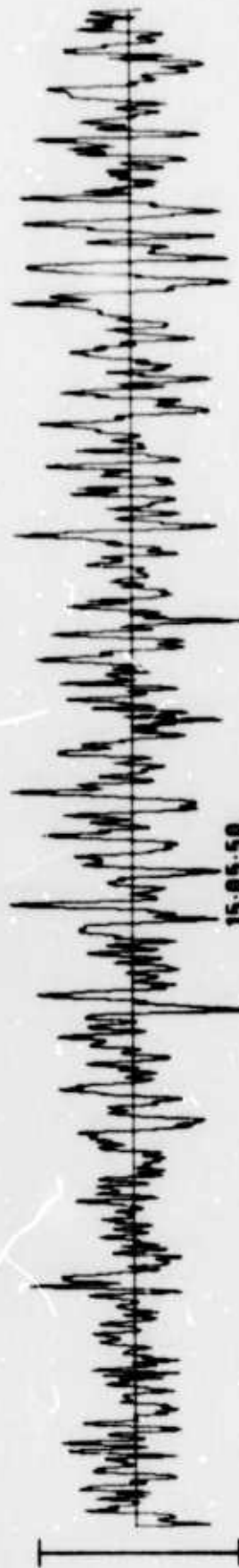
SF2

41.8



SPR

29.7



SPT

24.9

15:05:50



TIME

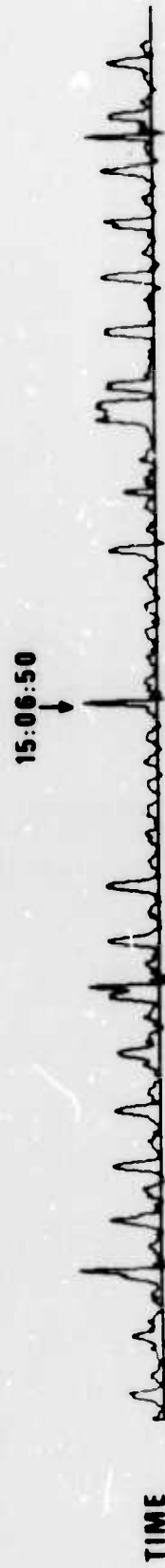
10 sec

7.

HN-ME 07 MAR 75

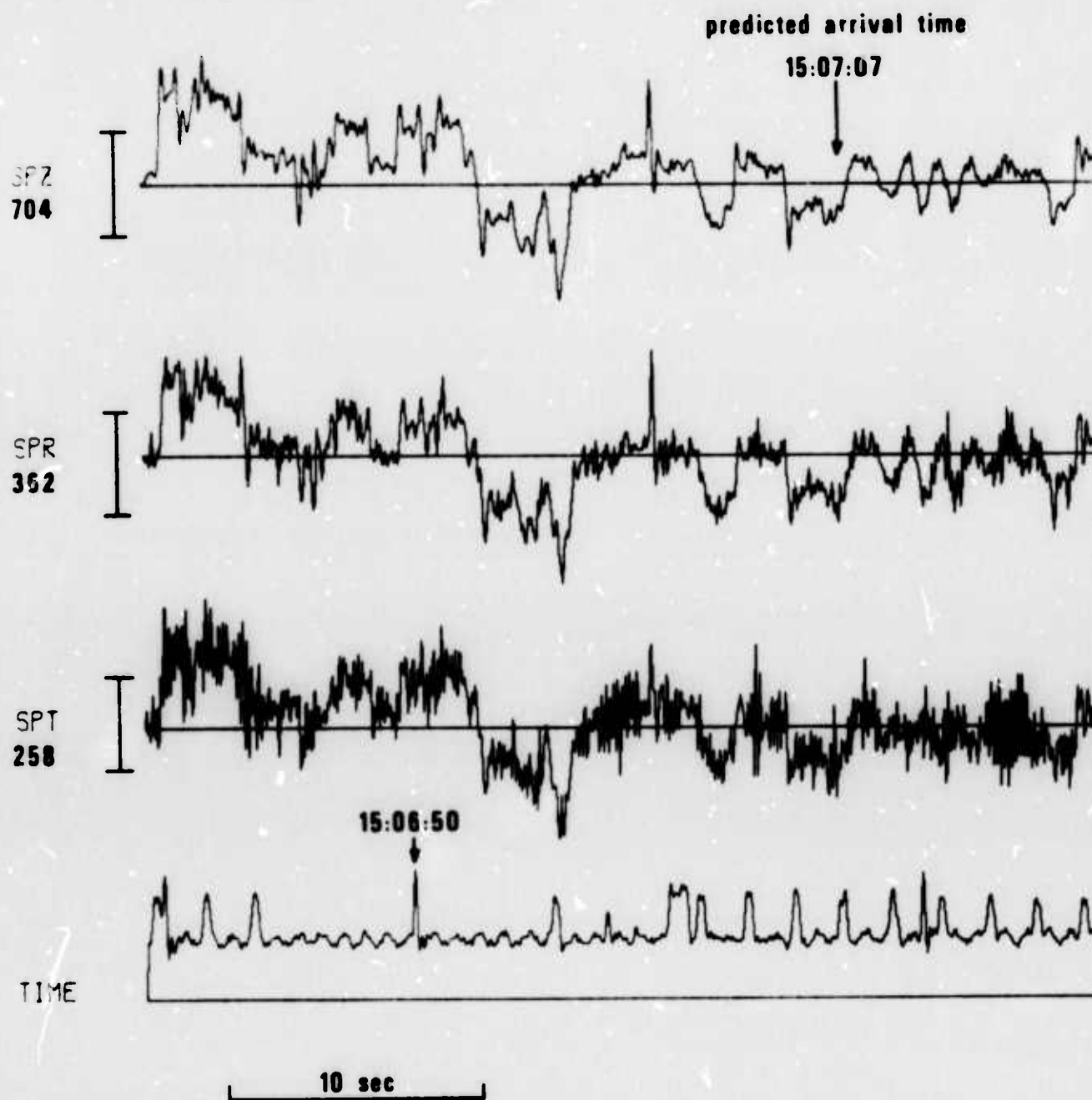


8.



10 sec

HN-ME 07 MAR 75



# LASA

1 7 MAR 1975

2 14 59 59 37.2N 116.6W

3 15 2 52.8 LAO P

06 B 5.0

41

SOUTHERN NEVADA

33.3

1.1

8.2

12.2

223.2

EPX 7508

BP-B 0.6-2.0 HZ

ABN 12

15:02:42.8

AB 87

FAB 77

PAB1 44

PAB2 49

PAB3 48

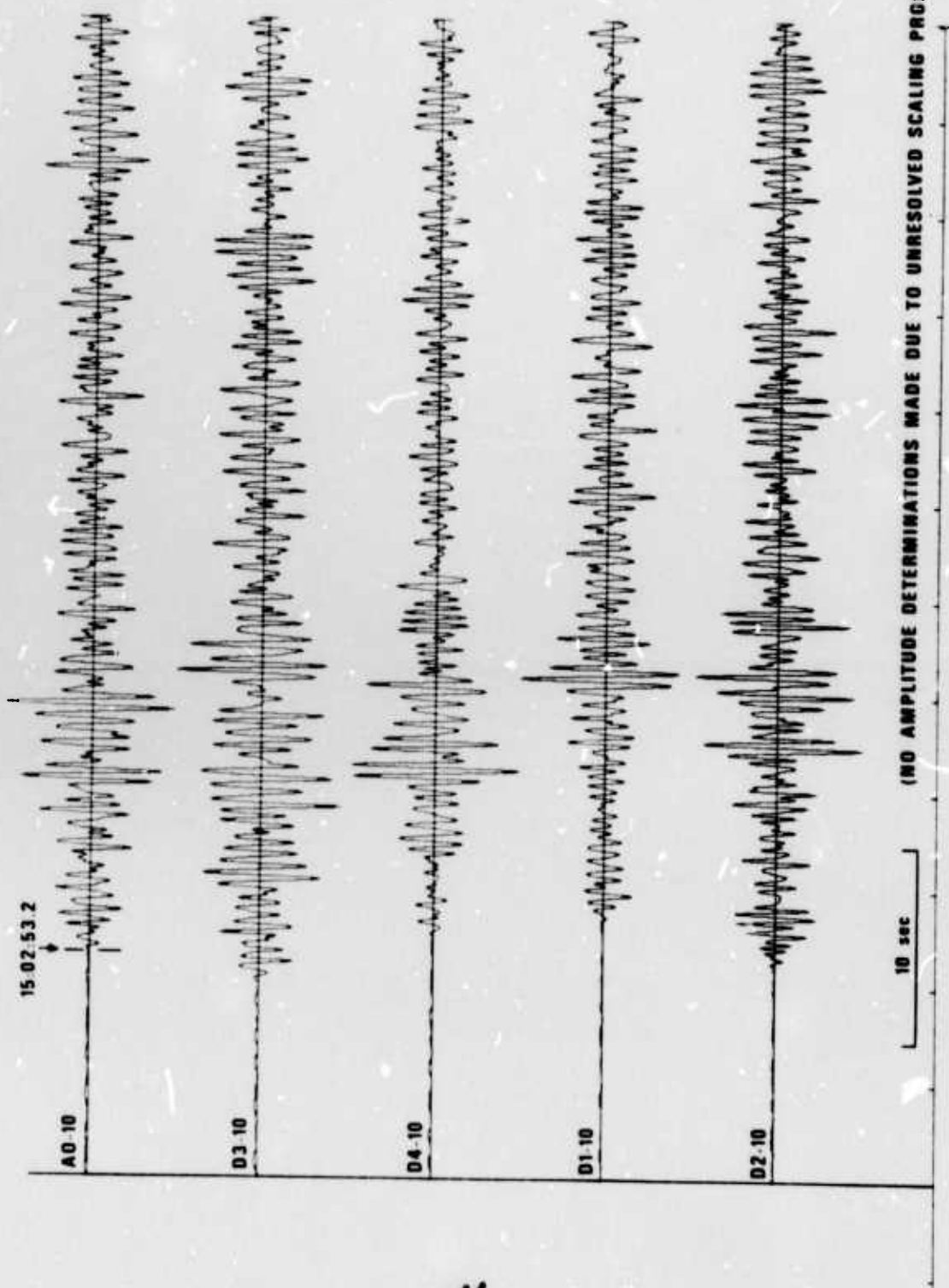
PAB4 46

10 sec

10.



LASA (INDIVIDUAL SHORT-PERIOD INSTRUMENTS) 07 MAR '75



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# NORSAR EVENT FILE

1975 MAR 7

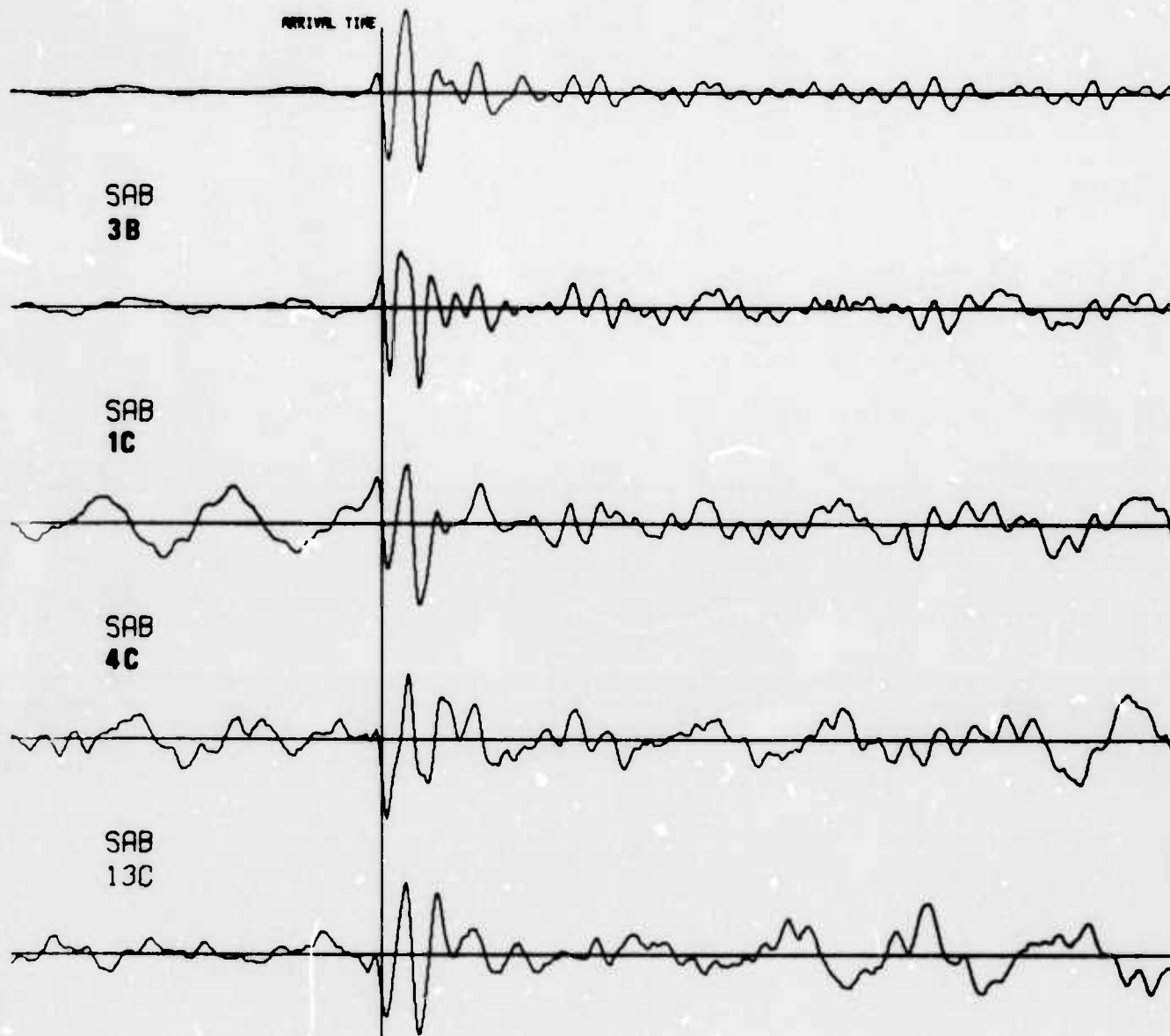
EPX NO. 92340 ARR. 15.11.33.0 36.1N 116.4W 5.2MB 33KM

DIST = 74.3 AZI = 317.9 AMP = 35.6 PER = 1.2

— = 5 SECONDS

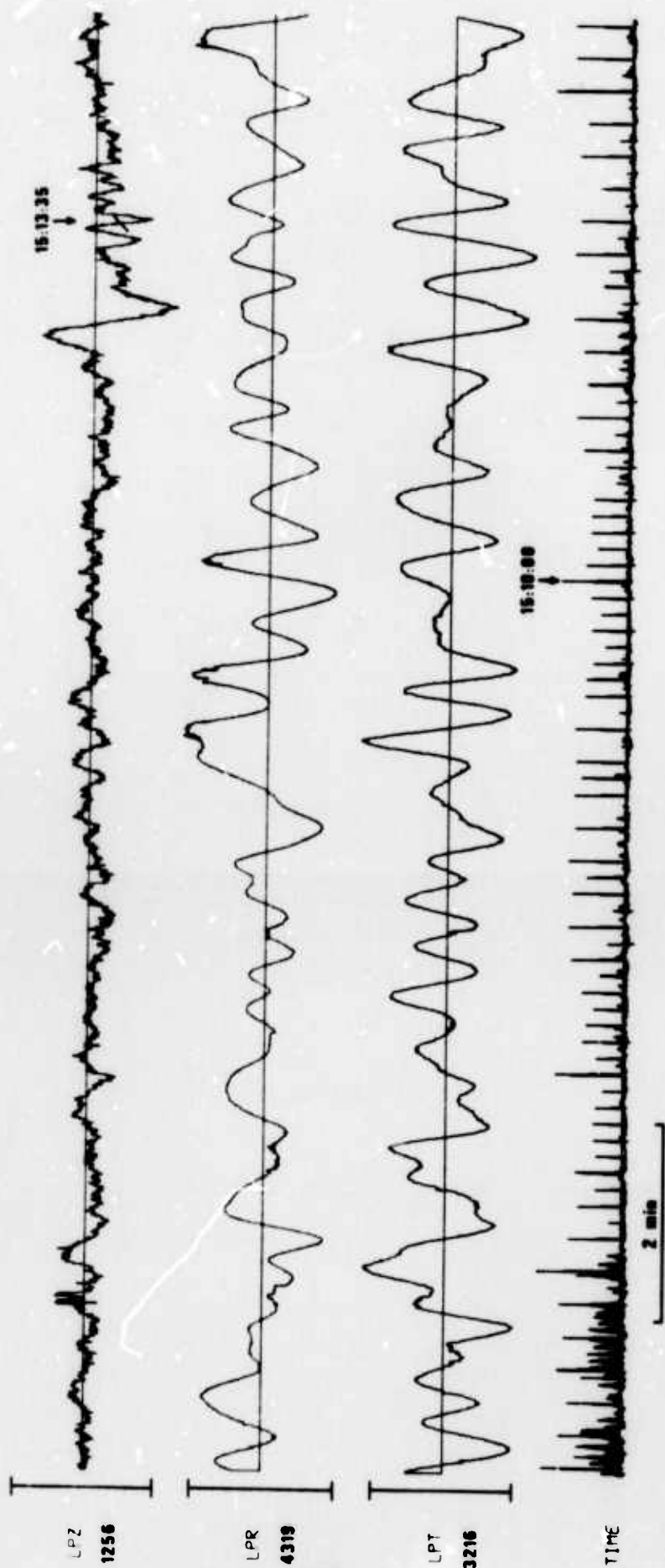
AB

ARRIVAL TIME

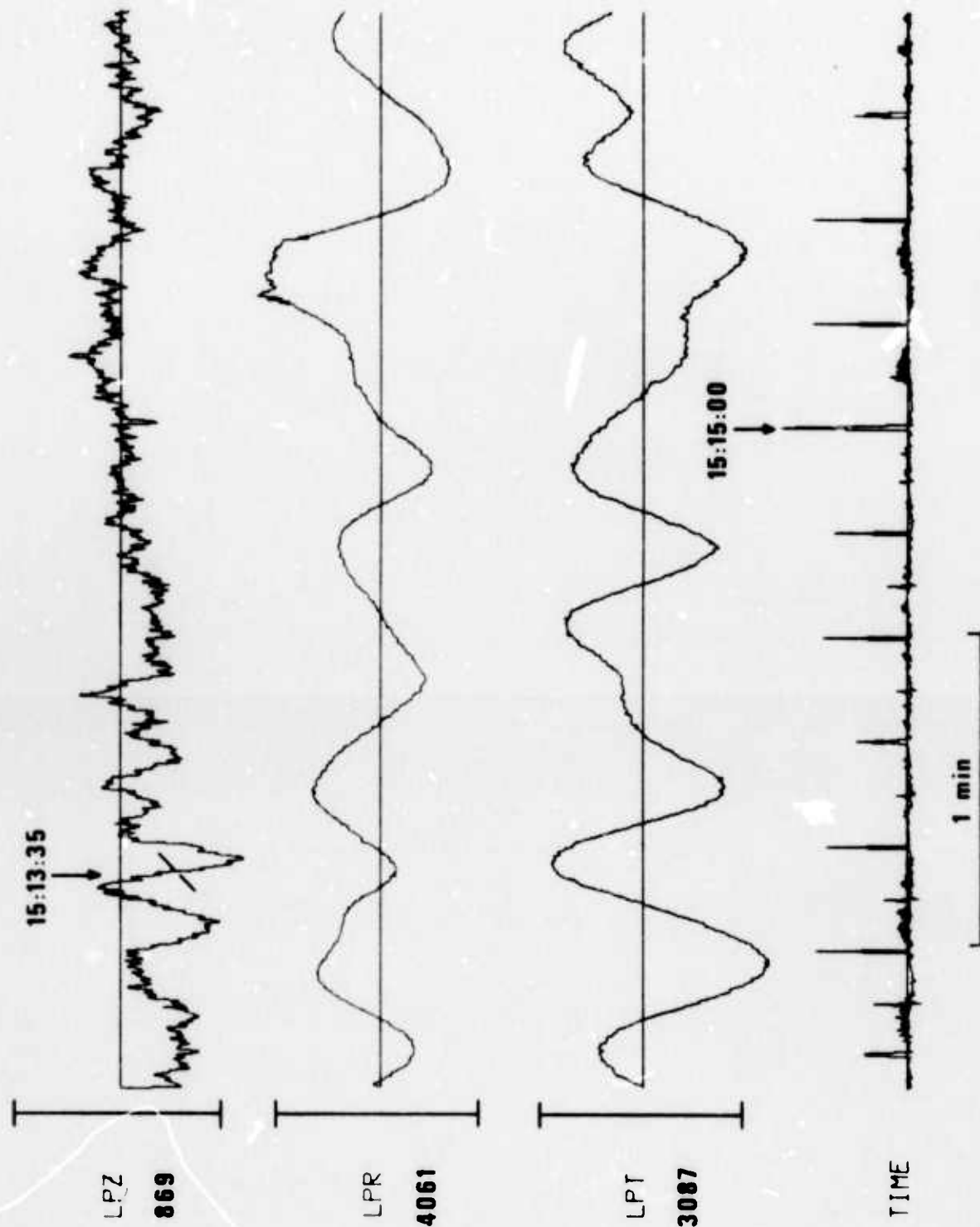


12.

RK-ON 07 MAR 75



RK-UN 07 MAR 75

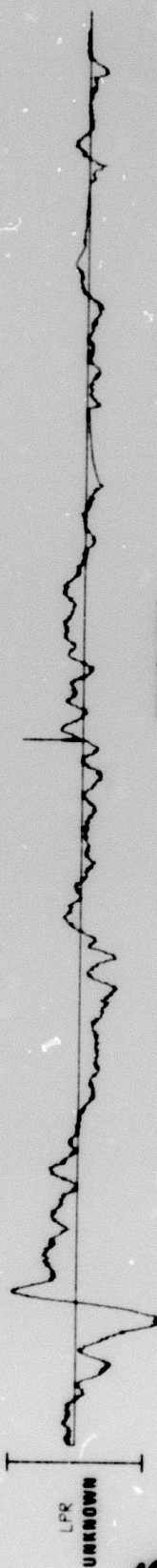


14.



WH2YK 07 MAR 75

15:17.00



separate event

15:14.40



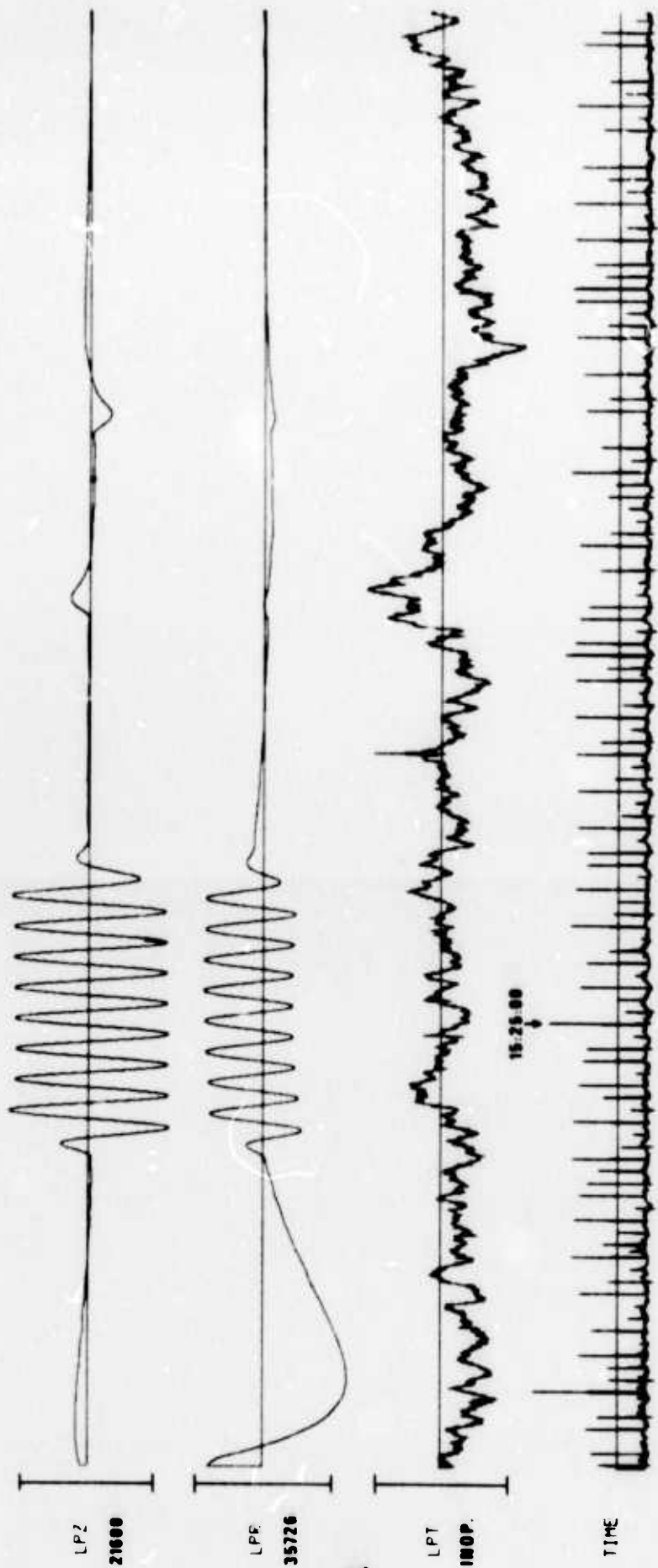
15:15.00



2 min

15.

HN-ME 07 MAR 75



16.